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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,336	09/22/2005	James Joseph Anthony McCormack	NL 030291	1287

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EXAMINER

CHOW, LIXI

ART UNIT	PAPER NUMBER
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2627

MAIL DATE	DELIVERY MODE
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01/17/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/550,336	Applicant(s) MCCORMACK, JAMES JOSEPH ANTHONY	
	Examiner Lixi Chow	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Specification

1. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 7, 8 10, 12-14, 18, 19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Nagara (US 2002/0131358).

Regarding claim 1:

Nagara discloses a radiation source driving device for controlling a voltage fed to a radiation source (Fig. 7, element 10) in an information reproducing system for reproducing information on an information carrier (see Fig. 1, element 1), comprising:

a radiation source controller (see Fig. 7, element 11) for controlling the voltage fed to the radiation source, and a power supply (elements 47 and 15) for providing a working voltage (V_w) to the radiation source controller (element 11), characterized in that the power supply comprises a control input (see Fig. 7) for controlling the working voltage (V_w) to the radiation source controller and in that the radiation source driving device further comprises power supply control means (Fig. 7, elements 40 and 32) for generating a control signal which is fed to the control input of the power supply wherein the control signal is dependent on the voltage fed to the radiation source (see par.[0010]-[0011]).

Regarding claim 2:

Nagara discloses a radiation source driving device as claimed in claim 1, characterized in that a first value of the control signal indicates that the radiation source is turned off and a second value of the control signal indicates that the radiation source is turned on, and in that the power supply outputs a first working voltage when the control signal has the first value and the power supply outputs a second working voltage higher than the first working voltage when the

control signal has the second value (see par. [0063]-[0064] and see Fig. 7, the on/off signal output from the controller 40).

Regarding claim 3:

Nagara discloses a radiation source driving device as claimed in claim 1, characterized in that a first value of the control signal indicates that the radiation source driving device reproduces information from the information carrier and a second value of the control signal indicates that the radiation source driving device writes information to the information carrier, and wherein the power supply outputs a first working voltage when the control signal has the first value and the power supply outputs a second working voltage higher than the first working voltage when the control signal has the second value (see par. [0063]-[0064]).

Regarding claim 7:

Nagara discloses a radiation source driving device as claimed in claim 1, further characterized by measurement means (see Fig. 7, elements 36 and 38) for measuring a variable which is indicative of the voltage fed to the radiation source and in that the measured variable is fed to the power supply control means, wherein the power supply control means are able to generate the control signal as a function of the measured variable (see par. [0064]-[0065]).

Regarding claim 8:

Nagara discloses a radiation source driving device as claimed in claim 7, characterized in that the measured variable is a measure for the peak voltage over the radiation source (see Fig. 7, element 38).

Regarding claim 10:

Nagara discloses a radiation source driving device as claimed in claim 7, characterized in that the power supply control means are arranged to regulate the working voltage to a level equal to a sum of a basic working voltage and a delta working voltage (see Fig. 7), wherein the basic working voltage is a minimal working voltage at which the radiation source controller is able to feed a required steady state voltage to the radiation source (see par. [0070]-[0071]).

Regarding claims 12-14, 18 and 19:

Claims 12-14, 18 and 19 are method claims and they recite similar limitations as in claims 1-3, 7 and 8; hence, claims 12-14, 18 and 19 are rejected under the same reasons set forth in claims 1-3, 7 and 8.

Regarding claim 21:

Nagara discloses a device (see Fig. 1) for recording and/or playback of information on an information carrier, the device including a radiation source driving device as claimed in claim 1;

a radiation source (see Fig. 7, element 10) for irradiating a radiation beam on the information carrier, wherein the power to the radiation source is controllable by the radiation source driving device (see Fig. 1, element 11);

mapping means (Fig. 1, element 3) for mapping the radiation beam at a spot at the information carrier;

displacement means (Fig. 1, element 2) for causing a relative displacement between the spot and the information carrier, and

transforming means (Fig. 1, element 4) for transforming a reflected radiation beam into an information signal.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4-6 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagara (US 2002/0131358) in view of Seo (US 6,934,235).

Regarding claim 4:

Nagara discloses all the limitations in claim 2, however, Nagara fails to mention that the control signal is dependent on the relative speed of the information carrier with respect to the radiation source. On the other hand, Seo discloses a radiation source driving device comprising a laser driving unit (see Fig. 1, element 113) for controlling the voltage fed to a radiation source (Fig. 1, element 106); and a controller for generating a control signal which controls a power supply (Fig. 1, element 105); wherein the control signal is dependent on the relative speed of a information carrier with respect to the radiation source and wherein the working voltage generated by the power supply is a function of the relative speed (see Abstract; the optical recording power is varied depending on the recording speed).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the device of Nagara such that the working voltage generated by the power supply is a function of the relative speed as taught by Seo. One of ordinary skill in the art would have been motivated to do this because recording quality is improved (see Seo, col. 13, ln 5-12).

Regarding claim 5:

Nagara discloses all the limitations in claim 1, however, Nagara fails to teach that the control signal is dependent on a type of information carrier to be read or written. On the other hand, Seo discloses a radiation source driving device comprising a laser driving unit (see Fig. 1, element 113) for controlling the voltage fed to a radiation source (Fig. 1, element 106); and a controller for generating a control signal which controls a power supply (Fig. 1, element 105); wherein the control signal is dependent on a type of information carrier to be read or written and wherein the working voltage generated by the power supply is a function of the type of information carrier (see Abstract; the optical recording power is varied based on the type of the recording medium).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the device of Nagara such that the working voltage generated by the power supply is a function of the type of information carrier as taught by Seo. One of ordinary skill in the art would have been motivated to do this because recording quality is improved and the compatibility of an optical drive with respect to various types of optical media is realized (see Seo, col. 13, ln 5-12).

Regarding claim 6:

Claim 6 essential recites similar limitations as in claims 4 and 5; therefore, claim 6 is rejected under the same reasons provided in claims 4 and 5.

Regarding claims 15-17:

Claims 15-17 are method claims and they recite similar limitations as in claims 4-6; hence, claims 15-17 are rejected under the same reasons set forth in claims 4-6.

6. Claims 9 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagara (US 2002/0131358) in view of Masaki et al. (US 6,275,462; hereafter Masaki).

Regarding claim 9:

Nagara discloses all the limitations in claim 7, however, Nagara fails to disclose that the measure variable is a current. On the other hand, Masaki shows an optical recording device comprising a measuring unit for monitoring the current fed to a radiation source (see Masaki, col. 9, ln 67 to col. 10, ln 2 and Fig. 3).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the device of Nagara to measure the current that fed into the radiation source as taught by Masaki. One of ordinary skill in the art would have been motivated to do this because the measured current can be used to compensate the radiation power.

Regarding claim 20:

Claim 20 recites similar limitations as in claim 9; hence, claim 20 is rejected under the same reasons set forth in claim 9.

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagara (US 2002/0131358) in view of Yamane et al. (US 4,813,048; hereafter Yamane).

Regarding claim 11:

Nagara discloses all the limitations in claim 10, and Nagara also discloses that the basic working voltage comprises at least the required steady state voltage; however, Nagara does not show the details of the radiation source controller. On the other hand, Yamane discloses a radiation source driving device comprising a field emitting transistor (see Fig. 6, element Q8) for supplying the voltage fed to a radiation source (see Fig. 6, LD), the field emitting transistor

having a drain-source voltage, wherein a basic working voltage comprises at least the drain-source voltage when the field emitting transistor becomes saturated (see Fig. 6 and col. 6, ln 26-29).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the device of Nagara to include a field emitting transistor for supplying the voltage fed to the radiation source. One of ordinary skill in the art would have been motivated to do this because field emitting transistor is capable of operating at high transmission rate.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shiozaki et al. (US 6,990,050) and Seo (US 6,341,117) are cited to show related references that teach the method of controlling power of laser diode.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lixi Chow whose telephone number is 571-272-7571. The examiner can normally be reached on Mon-Fri, 8:30am to 6:00pm.

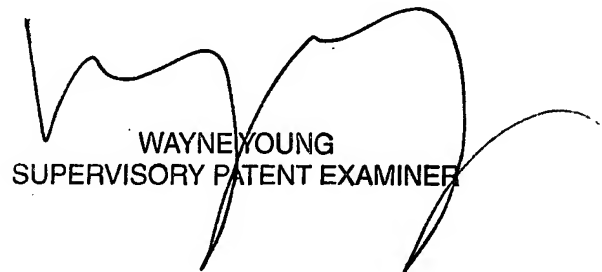
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LC 1/15/08



WAYNE YOUNG
SUPERVISORY PATENT EXAMINER